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Ogden, UT 84401**

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Forest Statistics for Private Land in Northern Idaho

Dwane D. Van Hooser

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Finally, the author thanks the many owners in northern Idaho for allowing access to their lands for data collection purposes.

RESEARCH SUMMARY

The privately owned forest land in the 10 northern Idaho counties amounts to 2,488,972 acres. These acres contain 4.5 billion cubic feet of growing stock and more than 19 billion board feet of sawtimber. This report presents information on total land area, timberland area, timber inventory, annual growth, mortality, and removals.

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Forest Statistics for Private Land in Northern Idaho

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INTRODUCTION

The most recent inventory of northern Idaho (fig. 1) began May 18, 1980, amidst the dust and rubble following the eruption of Mount St. Helens, and was completed April 15, 1981. This activity marked not only the beginning of the third inventory cycle in this area, but also the beginning of a new era for Forest Survey. For the first time, all forest lands were inventoried, regardless of their inherent capability to produce wood. In addition, data on use and condition were taken. This report summarizes the basic forest statistics for the private lands in the northern 10 counties of the State. Information for the working circle, each individual county, and the two major marketing zones (fig. 2) is presented. A comprehensive report covering all lands and all owners will be available in the near future.

The primary objective of Forest Survey—a continuing, nationwide undertaking of the Forest Service, U.S. Department of Agriculture—is to provide an assessment of the renewable resource situation for forest and rangelands of the Nation. Fundamental to the accomplishment of this objective are the periodic State-by-State resource inventories. Originally, Forest Survey was authorized by the McSweeney-McNary Act of 1928. The current authorization is through the Renewable Resources Research Act of 1978.

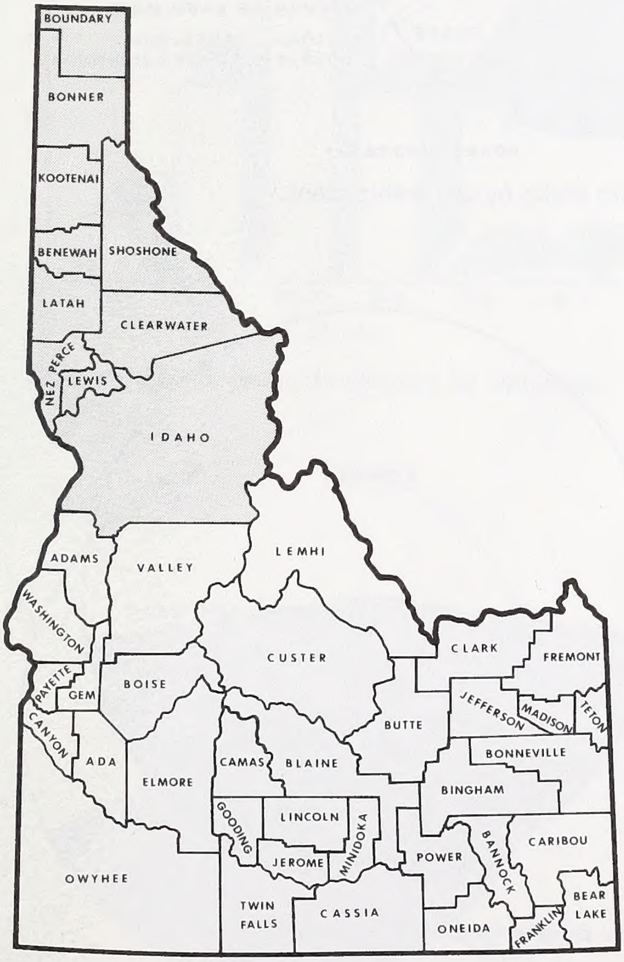


Figure 1.—Northern Idaho counties.

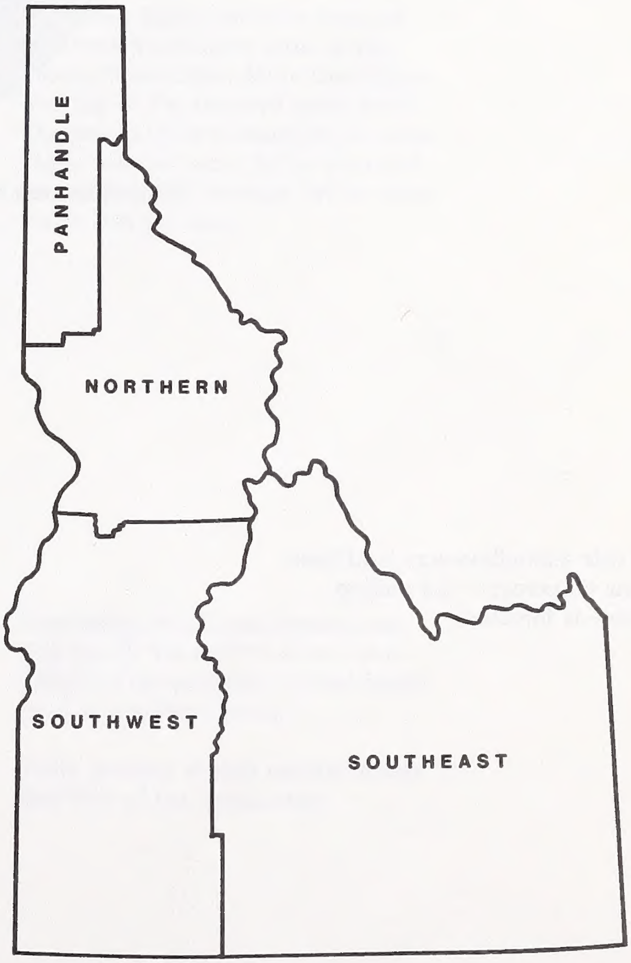


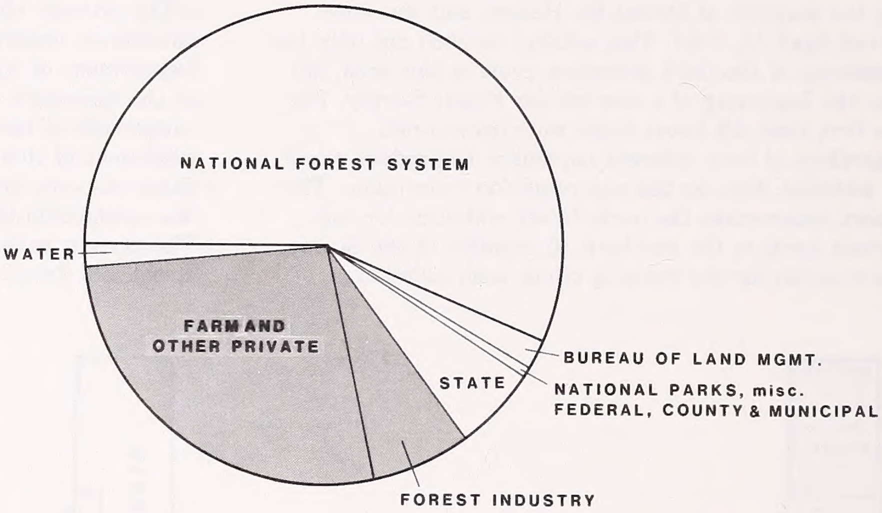
Figure 2.—Marketing zones in Idaho (source: Idaho Forest Products Marketing Bulletin).

The Intermountain Forest and Range Experiment Station with headquarters in Ogden, Utah, administers the forest resource inventories for the Rocky Mountain States of Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming, western South Dakota, western Texas, and Oklahoma's Panhandle. These inventories provide information on the extent and condition of State and privately owned forest lands, volume of timber, and rates of timber growth, removals, and mortality. These data, when combined with similar information on Federal lands, provide a basis for forming forest policies and programs and for the orderly development and use of the resources.

HIGHLIGHTS

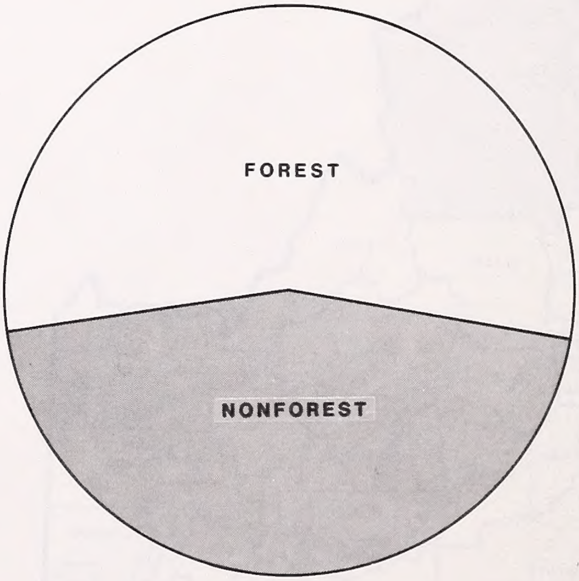
Area

Private holdings in northern Idaho amount to 4.5 million acres—more than one-third of the total area.

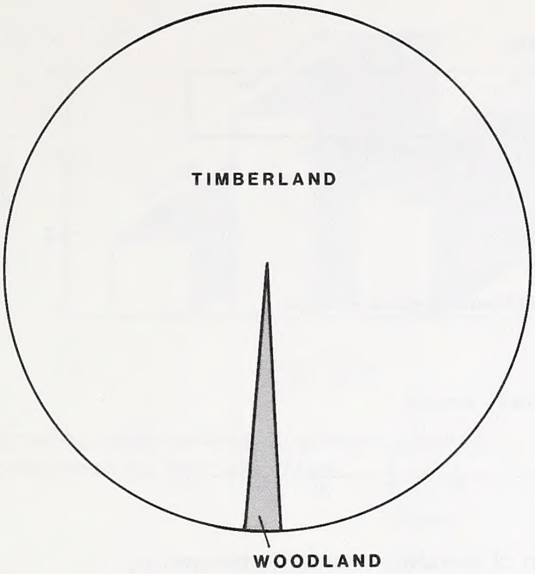


Total land area in northern Idaho by ownership class.

Of this 4.5-million-acre land base, some 55 percent—2.5 million acres—is forested.

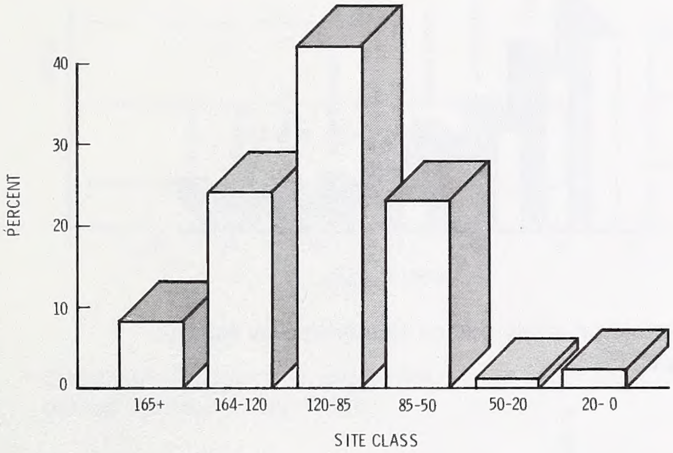


Total private land area by type of land.



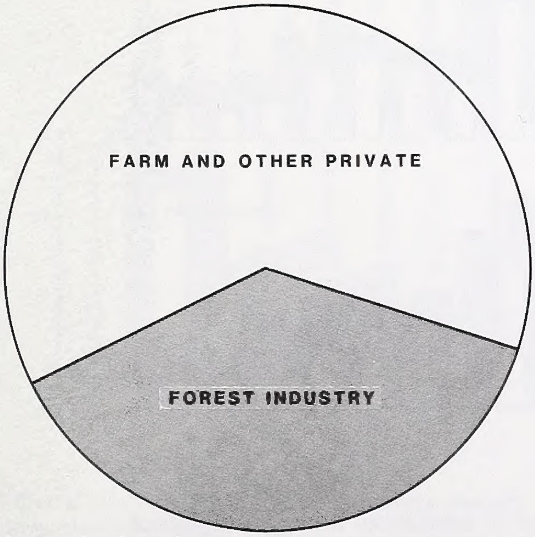
Area of privately owned forest land by type of land.

All but 41,000 acres are dominated by tree species that are traditionally used for conversion into industrial roundwood products.



Area of privately owned forest land by site class.

Northern Idaho contains some of the most productive sites in the Rocky Mountains. More than three-fourths of the forested acres have the potential to produce 85 or more cubic feet per acre. Fully one-third is capable of producing 120 or more cubic feet per acre.



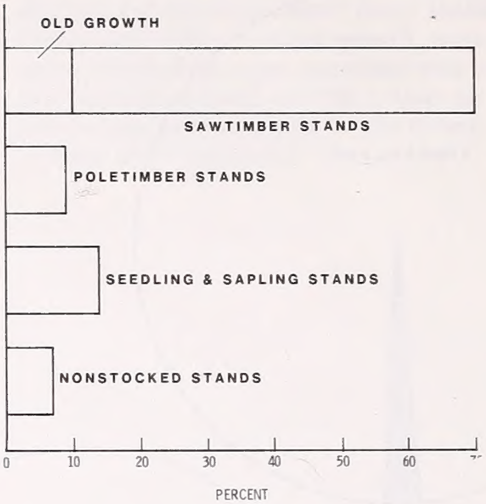
Area of privately owned forest land by owner.

Nonindustrial private owners control nearly 1.6 million acres—two-thirds of the privately owned forest land in northern Idaho.

Fully stocked stands occupy nearly one-fifth of the forest area.

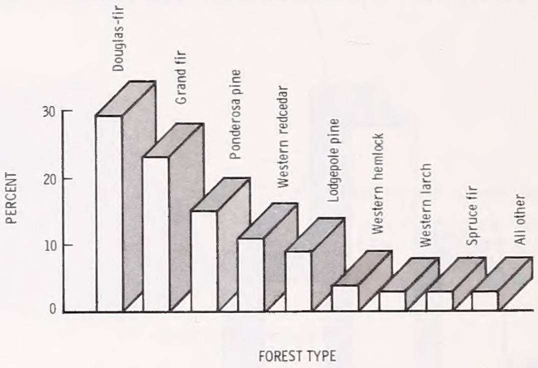
Only about 10 percent of the private forest land is in old-growth stands.

Nearly 70 percent of the forest is in sawtimber stands.



Distribution of privately owned timberland by stand size.

Douglas-fir (*Pseudotsuga menziesii* [Mirb.] Franco) and grand fir (*Abies grandis* [Dougl. ex D. Don] Lindl.) forest types predominate on more than half the forest area. The pines—ponderosa (*Pinus ponderosa* Dougl. ex Laws. var. *ponderosa*), lodgepole (*Pinus contorta* Dougl. ex Loud.) and western white (*Pinus monticola* Dougl. ex D. Don)—together occupy another one-quarter of the forest area.



Area of privately owned timberland by forest type.

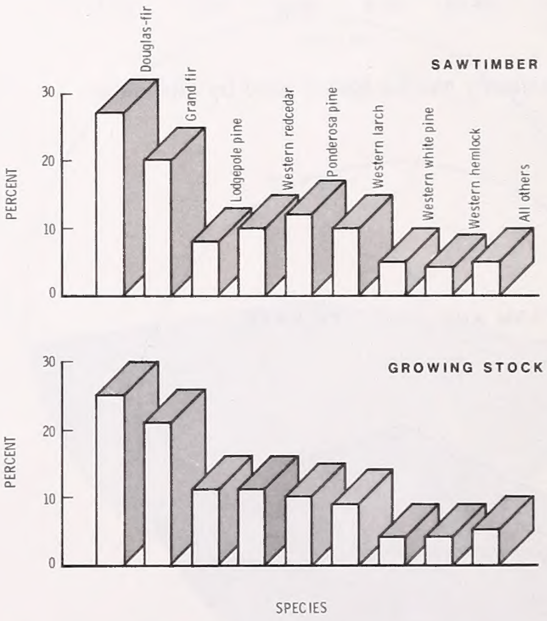
Volume

Growing stock volume amounts to 4.6 billion cubic feet and sawtimber totals 19.2 billion board feet. Rough, rotten, and salvable dead trees account for an additional 349 million cubic feet.

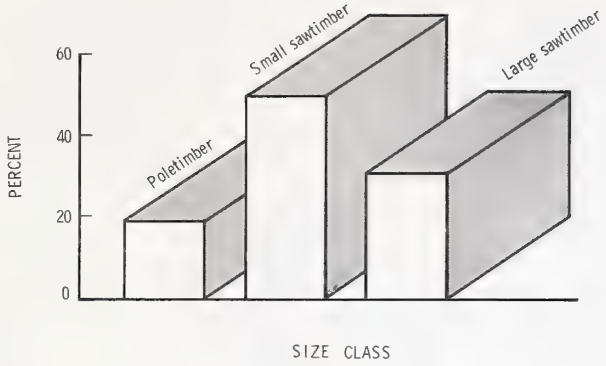
The most dominant species, Douglas-fir, constitutes 1.2 billion cubic feet—more than one-fourth of the total growing inventory.

One-fifth of the growing stock and sawtimber inventory is contained in another single species—grand fir.

Sawtimber-size trees account for 81 percent of the total growing stock inventory.

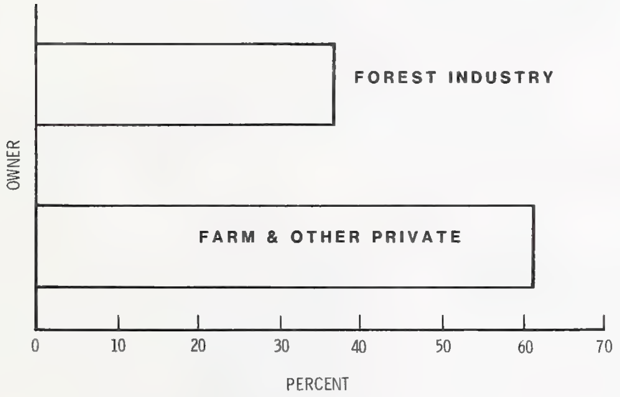


Distribution of sawtimber and growing stock volume on privately owned timberland by species.



Growing stock volume on privately owned timberland by tree size class.

Trees over 17 inches diameter at breast height (d.b.h.) account for 40 percent of the total sawtimber inventory.



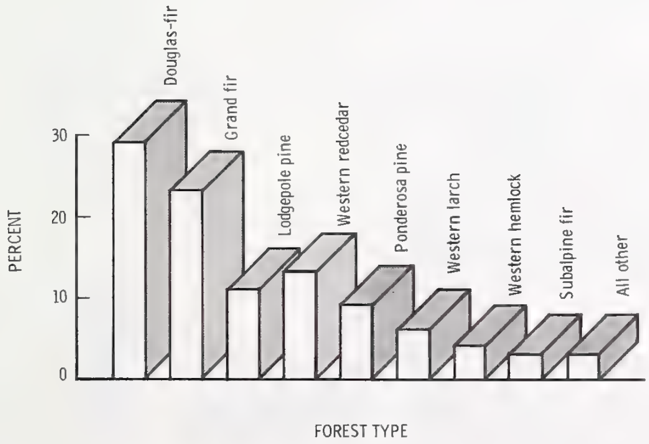
Distribution of growing stock volume on privately owned timberland by owner.

More than three-fifths of the growing stock volume is in nonindustrial private holdings.

The average nonindustrial private acre contains 1,785 cubic feet of growing stock including 7,320 board feet of sawtimber.

The average acre in forest industry ownership supports more than 2,000 cubic feet of growing stock including almost 9,000 board feet of sawtimber.

The sawtimber stands contain 88 percent of the growing stock volume and 94 percent of the board foot volume.

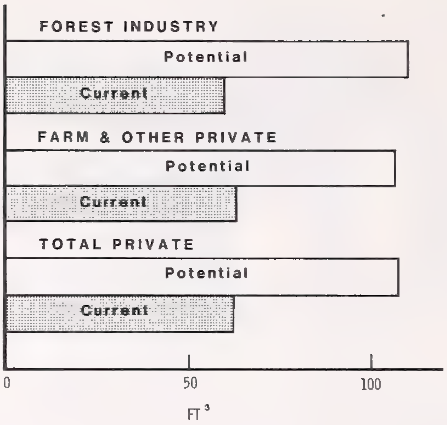


Volume of growing stock on privately owned timberland by forest type.

Stands in which either Douglas-fir or grand fir dominate account for more than half of the total growing stock and sawtimber inventory.

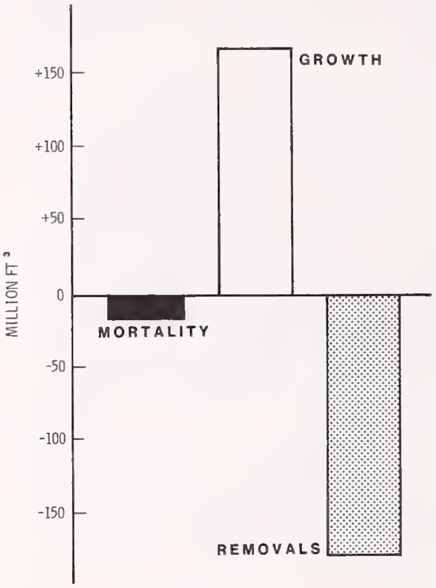
Components of Change

Currently, the forest is producing just over half of its potential of 108 cubic feet per acre. Net annual growth amounted to 150 million cubic feet of growing stock and 558 million board feet of sawtimber.



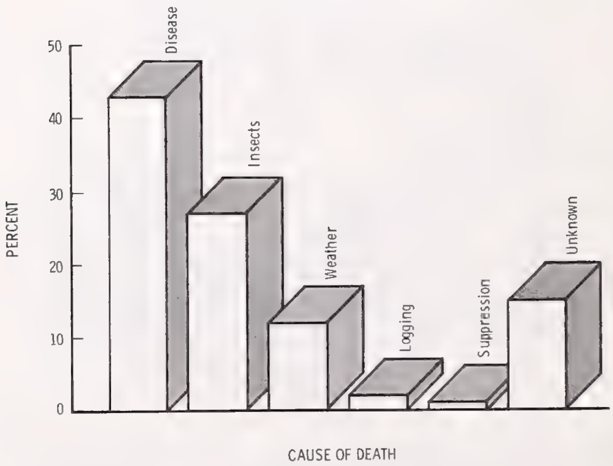
Current versus potential growth per acre on privately owned timberland by owner.

Annual mortality of 19 million cubic feet offset 11 percent of total growth on growing stock. The annual mortality reduced sawtimber growth by 69 million board feet—11 percent.

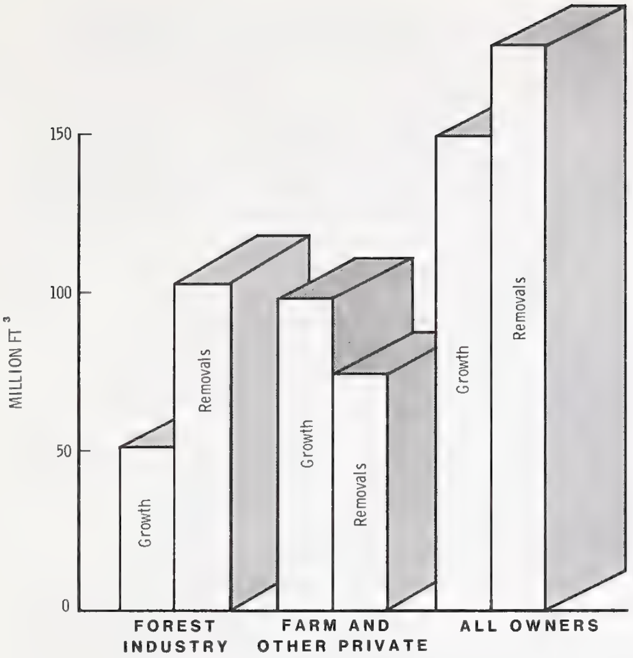


Components of change on privately owned timberland.

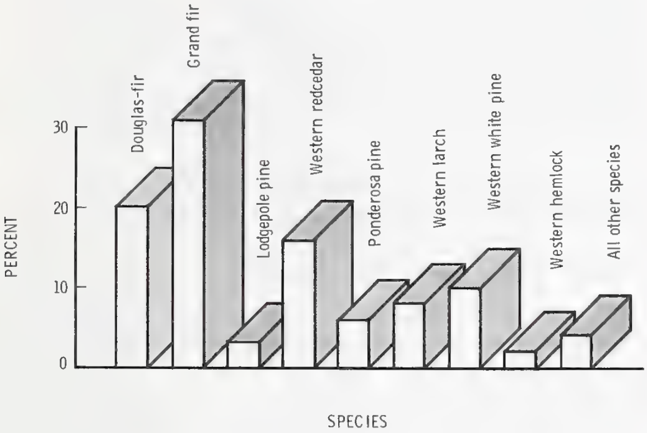
The major cause of mortality was disease, followed by insects and weather. Together these accounted for more than 80 percent of the total mortality volume in both growing stock and sawtimber.



Growing stock mortality on privately owned forest land by cause.



Growing stock growth versus removals on privately owned timberland by owner.



Distribution of removals from growing stock on privately owned timberland by species.

Removals amounted to 178 million cubic feet of growing stock and 1,013 million board feet of sawtimber. This is 4 percent of the growing stock inventory and 5 percent of the sawtimber inventory.

Removals exceed growing stock growth by nearly 20 percent and sawtimber growth by more than 80 percent. Thus, the growing stock inventory experienced a net decrease of 29 million cubic feet and 455 million board feet.

Nearly 90 percent of removals were converted into industrial roundwood products. The major product, accounting for 74 percent, was sawlogs.

One species—grand fir—accounts for nearly one-third of the removals from private lands.

HOW THE INVENTORY WAS CONDUCTED

The inventory was designed to provide reliable statistics primarily at the State and working circle levels.

1. Initial area estimates were based on the classification of 17,717 sample points systematically placed on the latest aerial photographs available. The sample points were summarized and grouped into strata for subsequent field sampling. The photo points, adjusted to meet known land areas, were used to compute area expansion factors for the sampling strata means.
2. Land classification and estimates for timber characteristics and volume were based on observations and measurements recorded at 699 ground sample locations, of which 426 were forested. Sample trees were selected using a 5-point cluster, which includes fixed radius plots (1/300 acre) for trees less than 5 inches d.b.h., and variable radius plots (40 basal area factor) for trees 5 inches d.b.h. or larger.
3. All photo and field data were punched onto cards and stored for computer editing, computation, and tabulation. Final estimates were based on statistical summaries of the data.

DATA RELIABILITY

Individual cells within tables should be used with caution. Some are based on small sample sizes, which may result in high sampling errors. The standard error percentages shown in tables 1 and 2 were calculated at the 67 percent confidence level.

TERMINOLOGY

The following section contains definitions that are relevant to the timber resource data presented in this resource bulletin.

Land

Area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals less than 120 feet in width; and lakes, reservoirs, and ponds less than 1 acre in size.

Water

Streams, sloughs, estuaries, and canals more than 120 feet in width; and lakes, reservoirs, and ponds more than 1 acre in size.

Land Use Classes

Forest land.—Land at least 10 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use.

Timberland.—Forest land at least 10 percent stocked with timber species that are producing or capable of producing crops of industrial wood and not reserved. Currently areas that may be inaccessible or inoperable are included.

Reserved forest land.—Forest land withdrawn from timber utilization through statute or administrative designation.

Woodland.—Forest land less than 10 percent stocked with timber species and not reserved.

Nonforest land.—Land that has never supported forests and lands formerly forested where use for timber management is precluded by development for other uses.

Public Ownership Classes

National Forest lands.—Federal lands legally designated as National Forest or purchase units and other lands under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

Bureau of Land Management lands.—Federal lands administered by the Bureau of Land Management.

Miscellaneous Federal lands.—Federal lands other than (1) National Forest lands and (2) lands administered by the Bureau of Land Management.

State lands.—Lands owned by States or lands leased to these governmental units for 50 years or more.

County and municipal lands.—Lands owned by counties and local public agencies or municipalities, or lands leased to these governmental units for 50 years or more.

Private Ownership Classes

Forest industry lands.—Lands owned by companies or by individuals operating wood-processing plants.

Farmer-owned lands.—Lands owned by farm operators. These exclude lands leased by farm operators from such nonfarm owners as railroad companies and States.

Other private lands.—Privately owned lands other than forest industry and farmer-owned lands.

Forest Type and Tree Species

Forest types.—A classification of forest land based upon the species forming a plurality of live-tree stocking.

Forest trees.—Woody plants having a well-developed stem or stems, usually more than 12 feet in height at maturity, with a more or less well defined crown.

Timber species.—Forest tree species presently or prospectively suitable for industrial wood products.

Woodland species.—Forest tree species not usually converted into conventional industrial wood products.

Softwoods.—Monocotyledonous trees, usually evergreen having needles or scalelike leaves.

Hardwoods.—Dicotyledonous trees, usually broadleaved and deciduous.

Area Condition Classes

Stocking.—Stocking is an expression of the extent to which growing space is effectively utilized by present or potential growing stock trees of commercial species. "Percent of stocking" is synonymous with "percentage of growing space occupied" and means the ratio of actual stocking to full stocking for comparable sites and stands. Basal area is used as a basis for measuring stocking.

"Stocking percentages" express current area occupancy in relation to specified standards for full stocking based on number, size, and spacing of trees considered necessary to fully utilize the forest land.

Full utilization of the site is assumed to occur over a range of basal area. As an interim guide, 60 percent of normal yield table values has been used to establish the lower limit of this range, which represents full-site occupancy, and equals 100 percent stocking. The upper limit of full stocking has been set at 132 percent.

Class 10.—Areas fully stocked (100 to 132 percent) with desirable trees and not overstocked (133 percent or more).

Class 20.—Areas fully stocked with desirable trees, but overstocked with all live trees.

Class 30.—Areas medium to fully stocked (60 to 99 percent) with desirable trees and with less than 30 percent of the area controlled by other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Class 40.—Areas medium to fully stocked with desirable trees and with 30 percent or more of the area controlled by other trees and/or conditions that ordinarily prevent occupancy by desirable trees.

Class 50.—Areas poorly stocked (16.7 to 59 percent) with desirable trees, but fully stocked with growing stock trees.

Class 60.—Areas poorly stocked with desirable trees, but with medium to full stocking of growing stock trees.

Class 70.—Areas nonstocked (less than 16.7 percent) or poorly stocked with desirable trees, and poorly stocked with growing stock trees.

Class 80.—Low-risk old-growth stands.

Class 90.—High-risk old-growth stands.

Nonstocked.—Areas less than 16.7 percent stocked with growing stock trees.

Productivity

Productivity class.—A classification of forest land in terms of potential growth in cubic feet of fully stocked natural stands.

Stand-Size Classes

Sawtimber stands.—Stands at least 16.7 percent stocked with growing stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.—Stands at least 16.7 percent stocked with growing stock trees in which half or more of this stocking is in poletimber and/or sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Sapling-seedling stands.—Stands at least 16.7 percent stocked with growing stock trees in which more than half of the stocking is saplings and/or seedlings.

Nonstocked land.—Commercial timberland less than 16.7 percent stocked with growing stock trees.

Class of Timber

Growing stock trees.—Live trees of timber species qualifying as desirable or acceptable trees. (Excludes rough, rotten, and dead trees of timber species and woodland species.)

Desirable trees.—Growing stock trees (1) having no serious defect in quality to limit present or prospective use for timber products; (2) of relatively high vigor; and (3) containing no pathogens that may result in death or serious deterioration before rotation age.

Acceptable trees.—Growing stock trees meeting specified standards of size and quality, but not qualifying as desirable trees.

Rough trees.—Live trees that are timber species that do not contain at least one 12-foot saw log or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, and/or do not meet Rocky Mountain regional specifications for freedom from defect primarily because of roughness or poor form.

Rotten trees.—Live trees that are timber species that do not contain at least one 12-foot saw log or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, and/or do not meet Rocky Mountain regional specifications for freedom from defect primarily because of rot; that is, when more than 50 percent of the cull volume (cubic-foot basis) in a tree is rotten.

Salvable dead trees.—Standing or down dead trees that are considered merchantable by Rocky Mountain regional standards.

Saw-log portion.—That part of the bole of sawtimber trees between the stump and the saw-log top. A 1-foot stump is used.

Upper-stem portion.—That part of the bole of sawtimber trees above the saw-log top to a minimum top diameter of 4 inches outside bark or to the point where the central stem breaks into limbs, whichever occurs first.

Tree-Size Classes

Seedlings.—Live trees less than 1 inch d.b.h.

Saplings.—Trees 1 to 4.9 inches d.b.h.

Poletimber trees.—Trees that are timber species at least 5 inches d.b.h., but smaller than sawtimber size.

Sawtimber trees.—Trees that are timber species and exceed poletimber size. In the Intermountain States, the minimum d.b.h. for softwood sawtimber is 9 inches and for hardwoods 11 inches.

Volume

Cull volume.—Portions of a tree's volume that are not usable for industrial wood products because of rot, form, or other defect.

Net volume.—Gross volume less deductions for cull.

Growing stock volume.—Net volume in cubic feet of live sawtimber trees and live poletimber trees from stump to a minimum 4-inch top (of central stem) outside bark. Net volume equals gross volume less deduction for rot and missing bole sections.

Sawtimber volume.—Net volume in board feet of sawtimber trees of commercial species. Net volume equals gross volume less deduction for rot, sweep, crook, and other defects that affect use for lumber.

Components of Change

Net annual growth.—The increase in net growing stock or sawtimber volume of a specified size class for a specific year. Components of net annual growth include the increment in net volume of trees at the beginning of the specific year surviving to its end, plus the net volume of trees reaching the size class during the year, minus the net volume of trees that died during the year, minus the net volume of trees that became rough or rotten trees during the year.

Mortality.—Number or sound-wood volume of growing stock trees dying from natural causes during a specified period, usually annually.

Removals.—The net volume of growing stock or sawtimber trees removed from the inventory by harvesting, including the unused portions of growing stock or sawtimber trees cut or killed by logging, and cultural operations such as timber stand improvement, land clearings, and changes in land use.

FOREST SURVEY TABLES

Table 1.--Area of private forest land in northern Idaho with percent standard error, 1981

Item	Softwoods		Hardwoods		All types	
	Acres	Percent standard error	Acres	Percent standard error	Acres	Percent standard error
Timberland	2,434,148	±1.4	13,852	±71.8	2,448,000	±1.3
Productive reserved[1]	--		--		--	
Other forest land:						
Unproductive reserved[1]	--		--		--	
Unproductive nonreserved	--	--	40,972	±35.8	40,972	±35.8

[1] Reserved land ares are estimated from aerial photos without field verification; therefore, standard errors are not calculated.

Table 2.--Net volume, net annual growth, and annual mortality of growing stock and sawtimber on private timberland in northern Idaho with percent standard error

Item	Softwoods		Hardwoods		All species	
	Volume	Percent standard error	Volume	Percent standard error	Volume	Percent standard error
Net volume, 1981:						
Growing stock (M cubic feet)	4,542,847	±4.4	46,554	±34.7	4,589,401	±4.4
Sawtimber[1] (M board feet)	18,974,239	±5.0	186,978	±40.8	19,161,217	±5.0
Net annual growth, 1980:						
Growing stock (M cubic feet)	147,849	±5.9	1,778	±58.9	149,627	±5.8
Sawtimber[1] (M board feet)	555,568	±5.9	2,088	±100.0	557,656	±5.9
Annual mortality, 1980:						
Growing stock (M cubic feet)	18,147	±17.0	545	±100.0	18,692	±16.7
Sawtimber[1] (M board feet)	66,035	±19.1	2,918	±100.0	68,953	±18.7

[1] International ¼-inch rule.

Table 3.--Total land and water area in northern Idaho by ownership class, 1981

Ownership class	Area
	- - - Acres - - -
Land:	
National Forest	7,771,096
Bureau of Land Management	271,110
National Park Service	2,109
Miscellaneous federal lands	40,844
State	793,275
County and municipal	34,958
Private:	
Forest industry[1]	917,712
Nonindustrial private:	
Farmer-rancher	2,608,305
Other	1,014,671
Total	3,622,976
Total private	4,540,688
Total land area	13,454,080
Census water	201,288
Total land and water[2]	13,655,368

[1] Forest industry is a component of private ownership, but because of its importance to the northern Idaho timber supply situation, area and resource statistics for forest industry are shown separately in this and other tables dealing with owner groups in this report.

[2] U.S. Bureau of the Census, land and water area of the United States, 1980.

Table 4.--Total land area in private ownership in northern Idaho by major land class and ownership class, 1981

Land class	Ownership class		
	Forest industry	Nonindustrial private	Total
	Acres		
Timberland	863,092	1,584,908	2,448,000
Nonreserved woodland	8,117	32,855	40,972
Total	871,209	1,617,763	2,488,972
Nonforest land	46,503	2,005,213	2,051,716
Total land area	917,712	3,622,976	4,540,688

Table 5.--Area of privately owned timberland in northern Idaho by forest type, stand-size class, and productivity class, 1981

Forest type and stand-size class	Productivity class					Total acres
	165+	120-164	85-119	50-84	20-49	
	Acres					
Douglas-fir:						
Sawtimber	66,461	180,688	196,512	65,731	--	509,392
Poletimber	13,733	4,842	24,083	13,852	--	56,510
Sapling and seedling	4,843	16,947	40,955	30,863	--	93,608
Nonstocked	--	3,244	7,016	34,834	4,843	49,937
Total	85,037	205,721	268,566	145,280	4,843	709,447
Western hemlock:						
Sawtimber	--	19,711	27,731	23,278	--	70,720
Poletimber	--	--	14,311	--	--	14,311
Sapling and seedling	--	--	6,404	--	--	6,404
Nonstocked	--	--	--	--	--	--
Total	--	19,711	48,446	23,278	--	91,435
Ponderosa pine:						
Sawtimber	12,749	69,170	99,861	59,686	--	241,466
Poletimber	4,729	--	--	13,314	--	18,043
Sapling and seedling	--	5,946	12,419	12,048	--	30,413
Nonstocked	--	--	39,297	32,484	17,311	89,092
Total	17,478	75,116	151,577	117,532	17,311	379,014
Western white pine:						
Sawtimber	13,305	--	--	--	--	13,305
Poletimber	--	4,843	--	--	--	4,843
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	5,700	--	--	--	5,700
Total	13,305	10,543	--	--	--	23,848
Lodgepole pine:						
Sawtimber	16,090	6,404	75,927	26,675	4,843	129,939
Poletimber	8,461	8,462	21,351	20,493	--	58,767
Sapling and seedling	--	--	--	24,551	--	24,551
Nonstocked	--	--	5,946	10,067	--	16,013
Total	24,551	14,866	103,224	81,786	4,843	229,270
Western larch:						
Sawtimber	--	20,329	28,315	12,241	--	60,885
Poletimber	--	8,462	11,247	--	--	19,709
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	28,791	39,562	12,241	--	80,594
Western redcedar:						
Sawtimber	29,084	29,177	93,452	17,631	--	169,344
Poletimber	--	6,823	6,789	--	--	13,612
Sapling and seedling	--	39,030	13,819	14,729	--	67,578
Nonstocked	--	5,700	5,700	--	--	11,400
Total	29,084	80,730	119,760	32,360	--	261,934

(con.)

Table 5 (con.)

Forest type and stand-size class	Productivity class					Total acres
	165+	120-164	85-119	50-84	20-49	
	- - - - - - - - - - - - - - - - Acres - - - - - - - - - - - - - - - -					
Grand fir:						
Sawtimber	25,577	141,626	189,079	77,925	--	434,207
Poletimber	4,843	--	9,686	6,823	--	21,352
Sapling and seedling	--	--	54,449	41,306	--	95,755
Nonstocked	--	13,193	--	--	--	13,193
Total	30,420	154,819	253,214	126,054	--	564,507
Spruce-subalpine Fir:						
Sawtimber	--	--	34,664	17,601	--	52,265
Poletimber	--	--	6,910	--	--	6,910
Sapling and seedling	--	--	7,906	--	--	7,906
Nonstocked	--	--	--	--	--	--
Total	--	--	49,480	17,601	--	67,081
Spruce:						
Sawtimber	--	5,946	15,372	--	--	21,318
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	5,700	--	5,700
Nonstocked	--	--	--	--	--	--
Total	--	5,946	15,372	5,700	--	27,018
Aspen:						
Sawtimber	--	--	--	--	--	--
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	5,946	--	--	--	5,946
Nonstocked	--	--	--	--	--	--
Total	--	5,946	--	--	--	5,946
Cottonwood:						
Sawtimber	--	7,906	--	--	--	7,906
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	7,906	--	--	--	7,906
All types:						
Sawtimber	163,266	480,957	760,913	300,768	4,843	1,710,747
Poletimber	31,766	33,432	94,377	54,482	--	214,057
Sapling and seedling	4,843	67,869	135,952	129,197	--	337,861
Nonstocked	--	27,837	57,959	77,385	22,154	185,335
Total	199,875	610,095	1,049,201	561,832	26,997	2,448,000

Table 6.--Area of forest industry owned timberland in northern Idaho by forest type, stand-size class, and productivity class, 1981

Forest type and stand-size class	Productivity class					Total acres
	165+	120-164	85-119	50-84	20-49	
	Acres					
Douglas-fir:						
Sawtimber	11,360	71,984	23,979	7,566	--	114,889
Poletimber	13,733	--	139	7,906	--	21,778
Sapling and seedling	--	5,700	6,933	12,716	--	25,349
Nonstocked	--	210	7,016	7,323	--	14,549
Total	25,093	77,894	38,067	35,511	--	176,565
Western hemlock:						
Sawtimber	--	19,711	14,923	14,816	--	49,450
Poletimber	--	--	7,906	--	--	7,906
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	19,711	22,829	14,816	--	57,356
Ponderosa pine:						
Sawtimber	7,906	1,116	6,002	6,823	--	21,847
Poletimber	--	--	--	6,910	--	6,910
Sapling and seedling	--	--	1,326	6,823	--	8,149
Nonstocked	--	--	1,327	4,244	4,771	10,342
Total	7,906	1,116	8,655	24,800	4,771	47,248
Western white pine:						
Sawtimber	--	--	--	--	--	--
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	5,700	--	--	--	5,700
Total	--	5,700	--	--	--	5,700
Lodgepole pine:						
Sawtimber	--	--	19,127	500	--	19,627
Poletimber	--	--	6,823	--	--	6,823
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	--	25,950	500	--	26,450
Western larch:						
Sawtimber	--	13,925	8,406	7,016	--	29,347
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	13,925	8,406	7,016	--	29,347
Western redcedar:						
Sawtimber	6,910	20,715	49,595	17,631	--	94,851
Poletimber	--	6,823	6,789	--	--	13,612
Sapling and seedling	--	34,187	13,819	14,729	--	62,735
Nonstocked	--	5,700	5,700	--	--	11,400
Total	6,910	67,425	75,903	32,360	--	182,598

(con.)

Table 6 (con.)

Forest type and stand-size class	Productivity class					Total acres
	165+	120-164	85-119	50-84	20-49	
	Acres					
Grand fir:						
Sawtimber	6,823	66,731	125,518	32,042	--	231,114
Poletimber	--	--	--	6,823	--	6,823
Sapling and seedling	--	--	32,181	10,721	--	42,902
Nonstocked	--	6,789	--	--	--	6,789
Total	6,823	73,520	157,699	49,586	--	287,628
Spruce-subalpine fir:						
Sawtimber	--	--	7,906	6,962	--	14,868
Poletimber	--	--	6,910	--	--	6,910
Sapling and seedling	--	--	7,906	--	--	7,906
Nonstocked	--	--	--	--	--	--
Total	--	--	22,722	6,962	--	29,684
Spruce:						
Sawtimber	--	--	6,910	--	--	6,910
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	5,700	--	5,700
Nonstocked	--	--	--	--	--	--
Total	--	--	6,910	5,700	--	12,610
Aspen:						
Sawtimber	--	--	--	--	--	--
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	--	--	--	--	--
Cottonwood:						
Sawtimber	--	7,906	--	--	--	7,906
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	7,906	--	--	--	7,906
All types:						
Sawtimber	32,999	202,088	262,366	93,356	--	590,809
Poletimber	13,733	6,823	28,567	21,639	--	70,762
Sapling and seedling	--	39,887	62,165	50,689	--	152,741
Nonstocked	--	18,399	14,043	11,567	4,771	48,780
Total	46,732	267,197	367,141	177,251	4,771	863,092

Table 7.--Area of nonindustrial private timberland in northern Idaho by forest type, stand-size class, and productivity class, 1981

Forest type and stand-size class	Productivity class					Total acres
	165+	120-164	85-119	50-84	20-49	
	Acres					
Douglas-fir:						
Sawtimber	55,101	108,704	172,533	58,165	--	394,503
Poletimber	--	4,842	23,944	5,946	--	34,732
Sapling and seedling	4,843	11,247	34,022	18,147	--	68,259
Nonstocked	--	3,034	--	27,511	4,843	35,388
Total	59,944	127,827	230,499	109,769	4,843	532,882
Western hemlock:						
Sawtimber	--	--	12,808	8,462	--	21,270
Poletimber	--	--	6,405	--	--	6,405
Sapling and seedling	--	--	6,404	--	--	6,404
Nonstocked	--	--	--	--	--	--
Total	--	--	25,617	8,462	--	34,079
Ponderosa pine:						
Sawtimber	4,843	68,054	93,859	52,863	--	219,619
Poletimber	4,729	--	--	6,404	--	11,133
Sapling and seedling	--	5,946	11,093	5,225	--	22,264
Nonstocked	--	--	37,970	28,240	12,540	78,750
Total	9,572	74,000	142,922	92,732	12,540	331,766
Western white pine:						
Sawtimber	13,305	--	--	--	--	13,305
Poletimber	--	4,843	--	--	--	4,843
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	13,305	4,843	--	--	--	18,148
Lodgepole pine:						
Sawtimber	16,090	6,404	56,800	26,175	4,843	110,312
Poletimber	8,461	8,462	14,528	20,493	--	51,944
Sapling and seedling	--	--	--	24,551	--	24,551
Nonstocked	--	--	5,946	10,067	--	16,013
Total	24,551	14,866	77,274	81,286	4,843	202,820
Western larch:						
Sawtimber	--	6,404	19,909	5,225	--	31,538
Poletimber	--	8,462	11,247	--	--	19,709
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	14,866	31,156	5,225	--	51,247
Western redcedar:						
Sawtimber	22,174	8,462	43,857	--	--	74,493
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	4,843	--	--	--	4,843
Nonstocked	--	--	--	--	--	--
Total	22,174	13,305	43,857	--	--	79,336

(con.)

Table 7 (con.)

Forest type and stand-size class	Productivity class					Total acres
	165+	120-164	85-119	50-84	20-49	
	Acres					
Grand fir:						
Sawtimber	18,754	74,895	63,561	45,883	--	203,093
Poletimber	4,843	--	9,686	--	--	14,529
Sapling and seedling	--	--	22,268	30,585	--	52,853
Nonstocked	--	6,404	--	--	--	6,404
Total	23,597	81,299	95,515	76,468	--	276,879
Spruce-subalpine fir:						
Sawtimber	--	--	26,758	10,639	--	37,397
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	--	26,758	10,639	--	37,397
Spruce:						
Sawtimber	--	5,946	8,462	--	--	14,408
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	5,946	8,462	--	--	14,408
Aspen:						
Sawtimber	--	--	--	--	--	--
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	5,946	--	--	--	5,946
Nonstocked	--	--	--	--	--	--
Total	--	5,946	--	--	--	5,946
Cottonwood:						
Sawtimber	--	--	--	--	--	--
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	--	--	--	--	--
All types:						
Sawtimber	130,267	278,869	498,547	207,412	4,843	1,119,938
Poletimber	18,033	26,609	65,810	32,843	--	143,295
Sapling and seedling	4,843	27,982	73,787	78,508	--	185,120
Nonstocked	--	9,438	43,916	65,818	17,383	136,555
Total	153,143	342,898	682,060	384,581	22,226	1,584,908

Table 8.--Area of privately owned timberland in northern Idaho by stand volume and ownership class, 1981

Stand volume per acre[1]	Ownership class		
	Forest industry	Nonindustrial Private	Total
	- - - - - - - - - - - - - Acres	- - - - - - - - - - -	
Less than 1,500 board feet	181,744	353,593	535,337
1,500 to 4,999 board feet	178,628	393,143	571,771
5,000 to 9,999 board feet	215,284	388,626	603,910
10,000 board feet or more	287,436	449,546	736,982
All classes	863,092	1,584,908	2,448,000

[1] International ¼-inch rule.

Table 9.--Area of privately owned timberland in northern Idaho by forest type and area condition class, 1981

Forest type	Area condition class										
	10	20	30	40	50	60	70	80	90	Nonstocked	All classes
	- - - - - - - - - - - - - -					Acres	- - - - - - - - - - - - - -				
Douglas-fir	--	--	68,077	43,920	51,705	213,320	218,613	31,476	32,399	49,937	709,447
Western hemlock	--	--	6,404	7,906	22,217	18,715	6,404	8,462	21,327	--	91,435
Ponderosa pine	--	--	--	5,946	4,728	118,546	160,702	--	--	89,092	379,014
Western white pine	--	--	--	--	8,462	4,843	4,843	--	--	5,700	23,848
Lodgepole pine	6,404	4,843	--	30,956	75,440	60,940	27,851	--	6,823	16,013	229,270
Western larch	--	6,404	--	19,709	13,926	16,368	--	5,862	18,325	--	80,594
Western redcedar	--	--	13,819	6,789	48,899	53,207	75,741	13,699	38,380	11,400	261,934
Grand fir	17,213	45,792	12,908	105,586	141,770	95,255	86,002	20,147	26,641	13,193	564,507
Spruce-subalpine fir	--	--	--	15,371	14,311	5,946	6,404	13,852	11,197	--	67,081
Spruce	--	--	--	--	--	5,700	8,462	--	12,856	--	27,018
Aspen	--	--	--	--	5,946	--	--	--	--	--	5,946
Cottonwood	--	--	--	--	7,906	--	--	--	--	--	7,906
All types	23,617	57,039	101,208	236,183	395,310	592,840	595,022	93,498	167,948	185,335	2,448,000

Table 10.--Area of privately owned woodland in northern Idaho by land class, ownership class, and forest type, 1981

Ownership class	Forest type			
	Oak	Riparian woodland	Other west hardwoods	All types
	- - - - - - - - - - - Acres	- - - - - - - - - - -		
Woodland:				
Forest industry	7,907	210	--	8,117
Nonindustrial private	4,842	22,788	5,225	32,855
Total	12,749	22,998	5,225	40,972

Table 11.--Number of growing stock trees on privately owned timberland in northern Idaho by species and diameter class, 1981

Species	Diameter class (inches at breast height)															
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	All classes
	- - - - - - - - - - - - - - -	- - - - - - - - - - - - - - -	Thousand trees	- - - - - - - - - - - - - - -												
Douglas-fir	36,301	27,006	24,123	15,921	12,747	8,752	7,234	4,330	2,643	1,321	561	412	251	96	52	141,750
Ponderosa pine	4,672	7,309	5,559	5,355	3,242	3,915	2,619	1,610	1,007	977	507	302	146	46	116	37,382
Western white pine	3,196	1.174	1,656	315	936	851	696	198	381	187	55	36	76	--	59	9,816
Lodgepole pine	15,253	9,340	16,467	15,793	6,676	4,629	1,192	475	76	59	14	--	--	--	--	69,974
Western larch	4,972	9,654	10,280	6,782	4,694	2,894	1,988	1,054	551	309	177	103	41	36	41	43,576
Grand fir	80,038	50,690	27,348	13,926	9,784	5,329	4,071	2,429	1,419	698	306	267	190	73	243	196,811
Subalpine fir	5,464	3,468	2,757	1,995	764	1,228	441	260	--	73	21	--	41	--	--	16,512
Engelmann spruce	5,109	1,870	1,903	1,126	412	298	226	169	66	50	157	69	40	17	23	11,535
Western hemlock	13,826	11,680	7,440	3,191	2,084	1,459	883	390	329	214	80	34	30	12	10	41,662
Western redcedar	48,391	21,351	14,455	7,166	5,779	3,056	2,252	1,614	883	637	582	203	113	93	420	106,995
Total softwoods	217,222	143,542	111,988	71,570	47,118	32,411	21,602	12,529	7,355	4,525	2,460	1,426	928	373	964	676,013
Aspen	4,315	3,059	1,238	309	--	52	--	41	--	39	15	--	--	--	--	9,068
Cottonwood	1,453	--	261	--	148	--	67	69	98	112	71	86	--	29	21	2,415
Total hardwoods	5,768	3,059	1,499	309	148	52	67	110	98	151	86	86	--	29	21	11,483
All species	222,990	146,601	113,487	71,879	47,266	32,463	21,669	12,639	7,453	4,676	2,546	1,512	928	402	985	687,496

Table 12.--Number of cull and salvable dead trees on privately owned timberland in northern Idaho by ownership class, and softwoods and hardwoods, 1981

Ownership class and species group	Cull trees			Salvable dead trees	All dead trees
	Sound	Rotten	Total		
	- - - - - - - - - - - - - Thousand trees - - - - - - - - - - - - -				
Forest industry:					
Softwoods	357	2,635	2,992	14,300	17,292
Hardwoods	--	--	--	43	43
Total	357	2,635	2,992	14,343	17,335
Nonindustrial private:					
Softwoods	--	2,410	2,410	17,747	20,157
Hardwoods	--	41	41	96	137
Total	--	2,451	2,451	17,843	20,294
Total:					
Softwoods	357	5,045	5,402	32,047	37,449
Hardwoods	0	41	41	139	180
Total	357	5,086	5,443	32,186	37,629

Table 13.--Net volume of growing stock on privately owned timberland in northern Idaho by ownership class, forest type, and stand-size class, 1981

Ownership class	Forest type	Stand-size class				
		Sawtimber	Poletimber	Sapling/seedling	Nonstocked	All classes
		Thousand cubic feet				
Forest industry:						
	Douglas-fir	327,416	54,615	6,910	2,173	391,114
	Western hemlock	111,221	11,239	--	--	122,460
	Ponderosa pine	27,068	8,594	4,295	1,055	41,012
	Western white pine	--	--	--	--	--
	Lodgepole pine	48,171	28,702	--	--	76,873
	Western larch	102,568	--	--	--	102,568
	Western redcedar	316,319	6,294	38,470	--	361,083
	Grand fir	565,375	1,877	10,851	--	578,103
	Spruce-subalpine fir	23,244	13,172	3,025	--	39,441
	Spruce	23,998	--	--	--	23,998
	Aspen	--	--	--	--	--
	Cottonwood	24,141	--	--	--	24,141
	All types	1,569,521	124,493	63,551	3,228	1,760,793
Nonindustrial private:						
	Douglas-fir	843,132	39,443	40,490	1,649	924,714
	Western hemlock	32,223	5,388	1,515	--	39,126
	Ponderosa pine	355,696	8,880	7,798	13,555	385,929
	Western white pine	58,841	504	--	--	59,345
	Lodgepole pine	260,293	159,594	8,150	1,235	429,272
	Western larch	111,211	43,789	--	--	155,000
	Western redcedar	257,623	--	--	--	257,623
	Grand fir	430,272	20,635	10,545	--	461,452
	Spruce-subalpine fir	89,224	--	--	--	89,224
	Spruce	24,502	--	--	--	24,502
	Aspen	--	--	2,421	--	2,421
	Cottonwood	--	--	--	--	--
	All types	2,463,017	278,233	70,919	16,439	2,828,608
Total:						
	Douglas-fir	1,170,548	94,058	47,400	3,822	1,315,828
	Western hemlock	143,444	16,627	1,515	--	161,586
	Ponderosa pine	382,764	17,474	12,093	14,610	426,941
	Western white pine	58,841	504	--	--	59,345
	Lodgepole pine	308,464	188,296	8,150	1,235	506,145
	Western larch	213,779	43,789	--	--	257,568
	Western redcedar	573,942	6,294	38,470	--	618,706
	Grand fir	995,647	22,512	21,396	--	1,039,555
	Spruce-subalpine fir	112,468	13,172	3,025	--	128,665
	Spruce	48,500	--	--	--	48,500
	Aspen	--	--	2,421	--	2,421
	Cottonwood	24,141	--	--	--	24,141
	All types	4,032,538	402,726	134,470	19,667	4,589,401

Table 14.--Net volume of sawtimber on privately owned timberland in northern Idaho by ownership class, forest type, and stand-size class, 1981

Ownership class	Forest type	Stand-size class				
		Sawtimber	Poletimber	Sapling/seedling	Nonstocked	All classes
		- - - - - - Thousand board feet, International ¼-inch rule - - - - - -				
Forest industry:						
	Douglas-fir	1,619,087	121,070	13,269	6,978	1,760,404
	Western hemlock	407,409	27,735	--	--	435,144
	Ponderosa pine	134,875	21,708	22,314	2,896	181,793
	Western white pine	--	--	--	--	--
	Lodgepole pine	165,495	56,224	--	--	221,719
	Western larch	478,353	--	--	--	478,353
	Western redcedar	1,495,674	--	130,088	--	1,625,762
	Grand fir	2,408,865	--	30,011	--	2,438,876
	Spruce-subalpine fir	112,789	28,129	8,050	--	148,968
	Spruce	138,021	--	--	--	138,021
	Aspen	--	--	--	--	--
	Cottonwood	130,635	--	--	--	130,635
	All types	7,091,203	254,866	203,732	9,874	7,559,675
Nonindustrial private:						
	Douglas-fir	3,808,695	66,530	155,584	4,522	4,035,331
	Western hemlock	144,742	6,193	--	--	150,935
	Ponderosa pine	1,707,230	15,868	34,605	70,359	1,828,062
	Western white pine	321,933	--	--	--	321,933
	Lodgepole pine	915,600	188,456	27,620	--	1,131,676
	Western larch	576,520	82,578	--	--	659,098
	Western redcedar	1,094,649	--	--	--	1,094,649
	Grand fir	1,806,494	35,998	25,984	--	1,868,476
	Spruce-subalpine fir	389,300	--	--	--	389,300
	Spruce	122,082	--	--	--	122,082
	Aspen	--	--	--	--	--
	Cottonwood	--	--	--	--	--
	All types	10,887,245	395,623	243,793	74,881	11,601,542
Total:						
	Douglas-fir	5,427,782	187,600	168,853	11,500	5,795,735
	Western hemlock	552,151	33,928	--	--	586,079
	Ponderosa pine	1,842,105	37,576	56,919	73,255	2,009,855
	Western white pine	321,933	--	--	--	321,933
	Lodgepole pine	1,081,095	244,680	27,620	--	1,353,395
	Western larch	1,054,873	82,578	--	--	1,137,451
	Western redcedar	2,590,323	--	130,088	--	2,720,411
	Grand fir	4,215,359	35,998	55,995	--	4,307,352
	Spruce-subalpine fir	502,089	28,129	8,050	--	538,268
	Spruce	260,103	--	--	--	260,103
	Aspen	--	--	--	--	--
	Cottonwood	130,635	--	--	--	130,635
	All types	17,978,448	650,489	447,525	84,755	19,161,217

Table 15.--Net volume of growing stock on privately owned timberland in northern Idaho by species and diameter class, 1981

Species	Diameter class (inches at breast height)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	Thousand cubic feet													
Douglas-fir	72,397	100,831	141,335	165,751	193,408	157,769	125,558	77,442	41,892	36,892	28,108	11,936	12,379	1,165,698
Ponderosa pine	7,624	25,167	29,146	63,236	66,385	54,783	51,048	57,314	38,347	31,410	17,145	7,934	21,234	470,773
Western white pine	8,426	1,634	13,025	21,233	25,566	10,656	25,802	16,714	6,707	4,950	11,827	--	35,279	181,819
Lodgepole pine	89,067	148,996	101,704	107,756	35,729	21,826	3,939	3,722	1,360	--	--	--	--	514,099
Western larch	35,853	49,941	65,477	62,417	59,991	42,879	31,027	22,935	13,474	10,772	4,955	4,966	8,422	413,109
Grand fir	77,632	92,490	128,862	114,506	133,378	104,549	84,336	53,107	30,125	28,387	25,513	11,081	67,733	951,699
Subalpine fir	10,106	13,900	8,883	23,011	10,459	9,565	--	3,563	1,425	--	3,506	--	--	84,418
Engelmann spruce	6,799	6,436	5,122	6,484	6,096	5,500	4,321	3,599	15,370	7,665	5,240	3,018	4,617	80,267
Western hemlock	17,439	23,339	26,842	28,717	25,652	16,004	17,869	14,326	7,634	3,324	3,450	1,853	1,452	187,901
Western redcedar	47,853	44,641	60,722	46,297	46,554	43,452	32,165	26,916	28,224	12,060	7,420	7,435	89,325	493,064
Total softwoods	373,196	507,375	581,118	639,408	603,218	466,983	376,065	279,638	184,558	135,460	107,164	48,223	240,441	4,542,847
Aspen	3,647	2,223	--	1,016	--	1,598	--	1,889	1,011	--	--	--	--	11,384
Cottonwood	1,107	--	2,098	--	2,311	2,301	4,814	5,880	4,751	5,837	--	3,258	2,813	35,170
Total hardwoods	4,754	2,223	2,098	1,016	2,311	3,899	4,814	7,769	5,762	5,837	--	3,258	2,813	46,554
All species	377,950	509,598	583,216	640,424	605,529	470,882	380,879	287,407	190,320	141,297	107,164	51,481	243,254	4,589,401

Table 16.--Net volume of sawtimber (International ¼-inch rule) on privately owned timberland in northern Idaho by species and diameter class, 1981

Species	Diameter class (inches at breast height)											
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	All classes
	Thousand board feet, International ¼-inch rule											
Douglas-fir	531,170	840,395	1,033,891	869,189	704,015	438,487	239,337	212,675	164,164	69,815	72,868	5,176,006
Ponderosa pine	99,503	290,697	352,955	308,442	301,396	341,193	231,152	190,186	103,760	50,286	135,059	2,404,629
Western white pine	50,147	118,629	145,196	59,964	142,325	92,844	37,991	28,461	68,665	--	209,772	953,994
Lodgepole pine	455,996	626,260	205,175	123,231	21,571	20,270	7,472	--	--	--	--	1,459,975
Western larch	287,064	372,576	359,624	257,076	185,883	138,157	81,563	67,787	31,043	31,067	52,088	1,863,928
Grand fir	496,856	603,609	720,678	556,383	430,170	259,448	143,102	131,278	117,016	50,756	315,652	3,824,948
Subalpine fir	38,219	121,258	55,309	50,559	--	18,711	7,854	--	19,773	--	--	311,683
Engelmann spruce	21,288	35,458	33,001	29,204	22,872	18,873	83,018	42,571	30,302	18,013	28,194	362,794
Western hemlock	107,003	141,570	133,507	85,016	95,905	77,283	42,783	18,883	19,893	10,924	8,635	741,402
Western redcedar	231,081	232,075	234,500	216,227	157,338	129,533	132,880	56,119	34,243	34,340	416,544	1,874,880
Total softwoods	2,318,327	3,382,527	3,273,836	2,555,291	2,061,475	1,534,799	1,007,152	747,960	588,859	265,201	1,238,812	18,974,239
Aspen	XXXXX	5,344	--	8,079	--	9,111	4,839	--	--	--	--	27,373
Cottonwood	XXXXX	--	12,235	11,368	23,096	30,680	24,407	29,738	--	15,019	13,062	159,605
Total hardwoods	XXXXX	5,344	12,235	19,447	23,096	39,791	29,246	29,738	--	15,019	13,062	186,978
All species	2,318,327	3,387,871	3,286,071	2,574,738	2,084,571	1,574,590	1,036,398	777,698	588,859	280,220	1,251,874	19,161,217

Table 17.--Net volume of sawtimber (Scribner rule) on privately owned timberland in northern Idaho by species and diameter class, 1981

Species	Diameter class (inches at breast height)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
	- - - - Thousand board feet, Scribner rule - - - -											
Douglas-fir	417,632	679,073	867,418	745,084	611,252	383,644	213,011	189,281	146,106	62,135	64,853	4,379,489
Ponderosa pine	66,159	219,284	285,429	255,938	255,424	290,778	198,426	165,649	90,920	44,754	120,203	1,992,964
Western white pine	42,019	98,027	124,434	52,555	125,885	82,631	33,738	25,331	61,112	--	186,697	832,429
Lodgepole pine	378,910	522,682	175,256	108,998	19,138	18,041	6,650	--	--	--	--	1,229,675
Western larch	213,366	277,141	286,044	213,551	159,537	120,969	71,612	60,293	27,629	27,649	46,358	1,504,149
Grand fir	405,572	495,714	616,884	484,367	379,606	230,495	127,360	116,802	104,144	45,173	280,930	3,287,047
Subalpine fir	30,904	98,992	46,387	43,799	--	16,463	6,990	--	17,598	--	--	261,133
Engelmann spruce	16,998	29,152	27,662	24,819	20,008	16,554	73,886	37,888	26,969	16,032	25,092	315,060
Western hemlock	84,157	114,984	114,868	74,947	85,356	68,782	37,861	16,791	17,704	9,723	7,685	632,858
Western redcedar	185,661	177,517	181,834	168,509	123,932	103,427	108,539	46,912	28,897	29,404	368,689	1,523,321
Total softwoods	1,841,378	2,712,566	2,726,216	2,172,567	1,780,138	1,331,784	878,073	658,947	521,079	234,870	1,100,507	15,958,125
Aspen	XXXXX	4,448	--	7,140	--	8,108	4,307	--	--	--	--	24,003
Cottonwood	XXXXX	--	10,555	9,911	20,453	26,921	21,703	26,467	--	13,367	11,625	141,002
Total hardwoods	XXXXX	4,448	10,555	17,051	20,453	35,029	26,010	26,467	--	13,367	11,625	165,005
All species	1,841,378	2,717,014	2,736,771	2,189,618	1,800,591	1,366,813	904,083	685,414	521,079	248,237	1,112,132	16,123,130

Table 18.--Net volume of growing stock and sawtimber (International ¼-inch rule) on privately owned timberland in northern Idaho by ownership class and species, 1981

Species	Ownership		Total
	Forest industry	Nonindustrial private	
	GROWING STOCK		
	- - - - - - - - - Thousand cubic feet - - - - - - - -		
Douglas-fir	323,118	842,580	1,165,698
Ponderosa pine	88,539	382,234	470,773
Western white pine	61,673	120,146	181,819
Lodgepole pine	84,103	429,996	514,099
Western larch	166,047	247,062	413,109
Grand fir	534,128	417,571	951,699
Subalpine fir	34,465	49,953	84,418
Engelmann spruce	24,183	56,084	80,267
Western hemlock	120,577	67,324	187,901
Western redcedar	306,503	186,561	493,064
Total softwoods	1,743,336	2,799,511	4,542,847
Aspen	4,097	7,287	11,384
Cottonwood	13,360	21,810	35,170
Total hardwoods	17,457	29,097	46,554
All species	1,760,793	2,828,608	4,589,401
	SAWTIMBER		
	- Thousand board feet, International ¼-inch rule -		
Douglas-fir	1,449,838	3,726,168	5,176,006
Ponderosa pine	489,102	1,915,527	2,404,629
Western white pine	325,457	628,537	953,994
Lodgepole pine	270,895	1,189,080	1,459,975
Western larch	817,557	1,046,371	1,863,928
Grand fir	2,166,224	1,658,724	3,824,948
Subalpine fir	127,539	184,144	311,683
Engelmann spruce	104,184	258,610	362,794
Western hemlock	488,757	252,645	741,402
Western redcedar	1,249,934	624,946	1,874,880
Total softwoods	7,489,487	11,484,752	18,974,239
Aspen	8,079	19,294	27,373
Cottonwood	62,109	97,496	159,605
Total hardwoods	70,188	116,790	186,978
All species	7,559,675	11,601,542	19,161,217

Table 19.--Net volume of sawtimber (Scribner rule) on privately owned timberland in northern Idaho by ownership class and species, 1981

Species	Ownership: Forest industry	Ownership: Nonindustrial private	Total
	SAWTIMBER		
	- - - - Thousand board feet, Scribner rule - - - -		
Douglas-fir	1,237,238	3,142,251	4,379,489
Ponderosa pine	416,027	1,576,937	1,992,964
Western white pine	286,131	546,298	832,429
Lodgepole pine	228,946	1,000,729	1,229,675
Western larch	667,766	836,383	1,504,149
Grand fir	1,870,067	1,416,980	3,287,047
Subalpine	107,513	153,620	261,133
Engelmann spruce	90,588	224,472	315,060
Western hemlock	419,989	212,869	632,858
Western redcedar	1,022,807	500,514	1,523,321
Total softwoods	6,347,072	9,611,053	15,958,125
Aspen	7,140	16,863	24,003
Cottonwood	55,052	85,950	141,002
Total hardwoods	62,192	102,813	165,005
All species	6,409,264	9,713,866	16,123,130

Table 20.--Net volume of timber on privately owned timberland in northern Idaho by class of timber, and softwoods and hardwoods, 1981

Class of timber	Softwoods	Hardwoods	All classes
	- - - - - - Thousand cubic feet - - - - - -		
Sawtimber trees:			
Saw-log portion	3,244,517	31,423	3,275,940
Upper-stem portion	417,759	6,056	423,815
Total	3,662,276	37,479	3,699,755
Poletimber trees	880,571	9,075	889,646
All growing stock trees	4,542,847	46,554	4,589,401
Sound cull trees	1,773	--	1,773
Rotten cull trees	41,629	419	42,048
Salvable dead trees	302,707	2,830	305,537
All timber	4,888,956	49,803	4,938,759

Table 21.--Net volume of growing stock on privately owned timberland in northern Idaho by forest type and species, 1981

Forest type	Species							
	Douglas-fir	Ponderosa pine	Western white pine	Lodgepole pine	Western larch	Grand fir	Subalpine fir	Engelmann spruce
	Thousand cubic feet							
Douglas-fir	885,546	121,092	11,354	28,189	83,627	116,694	4,918	5,695
Western hemlock	8,151	--	3,539	--	15,094	14,008	2,121	--
Ponderosa pine	56,788	300,155	4,490	29,791	21,264	7,827	--	--
Western white pine	2,490	1,043	42,042	3,922	7,367	2,481	--	--
Lodgepole pine	29,960	15,817	2,488	398,174	34,518	10,040	--	1,996
Western larch	29,469	7,802	17,795	5,899	144,320	15,884	--	3,164
Western redcedar	31,813	2,992	38,991	22,002	49,670	142,359	1,732	2,593
Grand fir	114,543	11,012	56,658	19,759	45,643	639,136	6,935	4,012
Spruce-subalpine fir	2,054	--	2,532	6,363	2,718	1,621	63,869	35,073
Spruce	3,456	--	1,930	--	8,888	1,649	4,843	27,734
Aspen	--	--	--	--	--	--	--	--
Cottonwood	1,428	10,860	--	--	--	--	--	--
All types	1,165,698	470,773	181,819	514,099	413,109	951,699	84,418	80,267

Table 21 (con.)

Forest Type	Species						All species
	Western hemlock	Western redcedar	Total softwoods	Aspen	Cottonwood	Total hardwoods	
	Thousand cubic feet						
Douglas-fir	6,236	47,326	1,310,677	1,725	3,427	5,152	1,315,829
Western hemlock	86,415	30,753	160,081	--	1,506	1,506	161,587
Ponderosa pine	1,064	2,018	423,397	2,499	1,045	3,544	426,941
Western white pine	--	--	59,345	--	--	--	59,345
Lodgepole pine	1,174	8,419	502,586	3,559	--	3,559	506,145
Western larch	7,117	20,614	252,064	--	5,504	5,504	257,568
Western redcedar	38,939	282,368	613,459	--	5,246	5,246	618,705
Grand fir	36,958	97,129	1,031,785	1,180	6,589	7,769	1,039,554
Spruce-subalpine fir	9,998	4,437	128,665	--	--	--	128,665
Spruce	--	--	48,500	--	--	--	48,500
Aspen	--	--	--	2,421	--	2,421	2,421
Cottonwood	--	--	12,288	--	11,853	11,853	24,141
All types	187,901	493,064	4,542,847	11,384	35,170	46,554	4,589,401

Table 22.--Net volume of sawtimber on privately owned timberland in northern Idaho by forest type and species, 1981

Forest type	Species							
	Douglas-fir	Ponderosa pine	Western white pine	Lodgepole pine	Western larch	Grand fir	Subalpine fir	Engelmann spruce
	- - - - - - - - - - - - - - Thousand board feet, International ¼-inch rule - - - - - - - - - - - - - -							
Douglas-fir	3,969,244	658,553	55,634	103,938	324,396	470,120	3,423	27,727
Western hemlock	22,591	--	11,938	--	62,643	35,292	11,235	--
Ponderosa pine	251,373	1,489,059	22,905	135,161	62,971	34,024	--	--
Western white pine	13,082	5,890	222,352	22,806	44,100	13,703	--	--
Lodgepole pine	94,525	69,092	11,360	977,262	161,456	5,482	--	--
Western larch	135,347	45,622	99,536	11,176	661,666	56,573	--	17,995
Western redcedar	143,526	15,588	229,165	106,546	277,975	584,157	9,234	9,804
Grand fir	508,091	53,391	275,754	67,176	197,146	2,608,483	25,870	19,501
Spruce-subalpine fir	10,512	--	14,704	35,910	16,087	8,300	237,893	146,396
Spruce	19,756	--	10,646	--	55,488	8,814	24,028	141,371
Aspen	--	--	--	--	--	--	--	--
Cottonwood	7,959	67,434	--	--	--	--	--	--
All types	5,176,006	2,404,629	953,994	1,459,975	1,863,928	3,824,948	311,683	362,794

Table 22 (con.)

Forest type	Species						
	Western hemlock	Western redcedar	Total softwoods	Aspen	Cottonwood	Total hardwoods	All species
	- - - - - - - - - - - - - - Thousand board feet, International ¼-inch rule - - - - - - - - - - - - - -						
Douglas-fir	6,176	156,813	5,776,024	8,727	10,985	19,712	5,795,736
Western hemlock	315,426	120,086	579,211	--	6,868	6,868	586,079
Ponderosa pine	5,012	9,349	2,009,854	--	--	--	2,009,854
Western white pine	--	--	321,933	--	--	--	321,933
Lodgepole pine	4,906	16,394	1,340,477	12,918	--	12,918	1,353,395
Western larch	30,943	53,800	1,112,658	--	24,794	24,794	1,137,452
Western recedar	162,152	1,152,678	2,690,825	--	29,585	29,585	2,720,410
Grand fir	169,807	344,273	4,269,492	5,728	32,131	37,859	4,307,351
Spruce-subalpine fir	46,980	21,487	538,269	--	--	--	538,269
Spruce	--	--	260,103	--	--	--	260,103
Aspen	--	--	--	--	--	--	--
Cottonwood	--	--	75,393	--	55,242	55,242	130,635
All types	741,402	1,874,880	18,974,239	27,373	159,605	186,978	19,161,217

Table 23.--Net annual growth of growing stock and sawtimber (International ¼-inch rule) on privately owned timberland in northern Idaho by ownership class and species, 1980

Species	Ownership: Forest industry	Ownership: Nonindustrial private	Total
	GROWING STOCK Thousand cubic feet		
Douglas-fir	9,164	29,737	38,901
Ponderosa pine	1,945	15,002	16,947
Western white pine	-837	3,011	2,174
Lodgepole pine	1,893	12,164	14,057
Western larch	2,362	5,809	8,171
Grand fir	18,919	15,611	34,530
Subalpine fir	2,331	1,919	4,250
Engelmann spruce	656	1,524	2,180
Western hemlock	4,118	2,044	6,162
Western redcedar	9,936	10,541	20,477
Total softwoods	50,487	97,362	147,849
Aspen	204	1,038	1,242
Cottonwood	395	141	536
Total hardwoods	599	1,179	1,778
All species	51,086	98,541	149,627
	SAWTIMBER Thousand board feet, International ¼-inch rule		
Douglas-fir	39,846	130,856	170,702
Ponderosa pine	11,426	75,846	87,272
Western white pine	2,027	21,654	23,681
Lodgepole pine	6,522	35,932	42,454
Western larch	14,701	16,535	31,236
Grand fir	63,241	62,415	125,656
Subalpine fir	2,152	3,036	5,188
Engelmann spruce	2,087	5,834	7,921
Western hemlock	14,198	7,222	21,420
Western redcedar	24,806	15,232	40,038
Total softwoods	181,006	374,562	555,568
Aspen	319	384	703
Cottonwood	1,745	-360	1,385
Total hardwoods	2,064	24	2,088
All species	183,070	374,586	557,656

Table 24.--Net annual growth of sawtimber (Scribner rule) on privately owned timberland in northern Idaho by ownership class and species, 1980

Species	Ownership: Forest industry	Ownership: Nonindustrial private	Total
	SAWTIMBER - - - Thousand board feet, Scribner rule - - -		
Douglas-fir	36,077	118,784	154,861
Ponderosa pine	10,429	65,635	76,064
Western white pine	1,972	19,815	21,787
Lodgepole pine	6,048	32,863	38,911
Western larch	13,501	15,221	28,722
Grand fir	57,190	56,408	113,598
Subalpine fir	1,970	2,933	4,903
Engelmann spruce	1,872	5,248	7,120
Western hemlock	13,146	6,765	19,911
Western redcedar	21,254	13,132	34,386
Total softwoods	163,459	336,804	500,263
Aspen	297	346	643
Cottonwood	1,627	-168	1,459
Total hardwoods	1,924	178	2,102
All species	165,383	336,982	502,365

Table 25.--Annual mortality of growing stock and sawtimber on privately owned timberland in northern Idaho by ownership class, and softwoods and hardwoods, 1980

Species group and ownership class	Growing stock	Sawtimber	
	Thousand cubic feet	- - - - - - - Thousand board feet - - - - - - -	
		International ¼-inch rule	Scribner rule
Softwoods:			
Forest industry	8,160	28,685	24,175
Nonindustrial private	9,987	37,350	31,443
Total	18,147	66,035	55,618
Hardwoods:			
Forest industry	--	--	--
Nonindustrial private	545	2,918	2,462
Total	545	2,918	2,462
All species:			
Forest industry	8,160	28,685	24,175
Nonindustrial private	10,532	40,268	33,905
Total	18,692	68,953	58,080

Table 26.--Annual mortality of growing stock and sawtimber on privately owned timberland in northern Idaho by cause of death and species, 1980

Species	Cause of Death								Total
	Insects	Disease	Fire	Animal	Weather	Suppression	Logging	Unknown	
	GROWING STOCK								
	- - - - - - - - - - - - - - - - - - - Thousand cubic feet - - - - - - - - - - - - - - - - - -								
Douglas-fir	207	937	--	--	1,259	--	--	696	3,099
Ponderosa pine	1,647	--	--	--	192	--	--	313	2,152
Western white pine	182	2,691	--	--	--	--	--	--	2,873
Lodgepole pine	--	502	--	--	--	208	--	--	710
Western larch	1,075	616	--	--	221	--	--	362	2,274
Grand fir	1,786	3,067	--	--	125	--	70	213	5,261
Subalpine fir	--	--	--	--	--	--	--	489	489
Engelmann spruce	--	--	--	--	--	--	--	--	--
Western hemlock	--	--	--	--	--	--	223	282	505
Western redcedar	--	153	--	--	461	--	170	--	784
Total softwoods	4,897	7,966	--	--	2,258	208	463	2,355	18,147
Aspen	--	--	--	--	--	--	--	--	--
Cottonwood	--	--	--	--	--	--	--	545	545
Total hardwoods	--	--	--	--	--	--	--	545	545
All species	4,897	7,966	--	--	2,258	208	463	2,900	18,692
	SAWTIMBER								
	- - - - - - - - - - - Thousand board feet, International ¼-inch rule - - - - - - - - - - -								
Douglas-fir	1,012	1,542	--	--	6,851	--	--	770	10,175
Ponderosa pine	9,223	--	--	--	908	--	--	1,132	11,263
Western white pine	--	6,223	--	--	--	--	--	--	6,223
Lodgepole pine	--	2,873	--	--	--	--	--	--	2,873
Western larch	4,569	741	--	--	--	--	--	2,174	7,484
Grand fir	6,759	12,810	--	--	--	--	--	1,086	20,655
Subalpine fir	--	--	--	--	--	--	--	2,069	2,069
Engelmann spruce	--	--	--	--	--	--	--	--	--
Western hemlock	--	--	--	--	--	--	1,007	1,348	2,355
Western redcedar	--	770	--	--	2,168	--	--	--	2,938
Total softwoods	21,563	24,959	--	--	9,927	--	1,007	8,579	66,035
Aspen	--	--	--	--	--	--	--	--	--
Cottonwood	--	--	--	--	--	--	--	2,918	2,918
Total hardwoods	--	--	--	--	--	--	--	2,918	2,918
All species	21,563	24,959	--	--	9,927	--	1,007	11,497	68,953

Table 27.--Annual removals of growing stock and sawtimber on privately owned timberland in northern Idaho by ownership class and species, 1980

Species	Ownership: Forest industry	Ownership: Nonindustrial private	Total
	GROWING STOCK		
	- - - - - - - - - Thousands cubic feet - - - - - - - -		
Douglas-fir	18,702	16,681	35,383
Engelmann spruce	2,555	1,876	4,431
Lodgepole pine	1,457	4,077	5,534
Ponderosa pine	1,577	9,040	10,617
Grand fir	40,145	16,477	56,622
Western larch	8,553	6,515	15,068
Western hemlock	1,703	1,677	3,380
Western redcedar	20,596	7,965	28,561
Western white pine	9,656	8,165	17,821
Other species	9	961	970
Total	104,953	73,434	178,387
	SAWTIMBER		
	- Thousand board feet - International ¼-inch rule -		
Douglas-fir	105,967	95,241	201,208
Engelmann spruce	14,481	10,707	25,188
Lodgepole pine	7,691	22,811	30,502
Ponderosa pine	8,935	51,557	60,492
Grand fir	227,371	94,052	321,423
Western larch	48,455	37,218	85,673
Western hemlock	9,650	9,568	19,218
Western redcedar	116,683	45,484	162,167
Western white pine	54,696	46,627	101,323
Other species	53	5,486	5,539
Total	593,982	418,751	1,012,733
	SAWTIMBER		
	- - - - Thousand board feet - Scribner rule - - - -		
Douglas-fir	85,986	76,801	162,787
Engelmann spruce	11,750	8,632	20,382
Lodgepole pine	6,241	18,395	24,636
Ponderosa pine	7,250	41,573	48,823
Grand fir	184,500	75,845	260,345
Western larch	39,320	30,012	69,332
Western hemlock	7,831	7,714	15,545
Western redcedar	94,681	36,679	131,360
Western white pine	44,383	37,600	81,983
Other species	43	4,424	4,467
Total	481,985	337,675	819,660

Table 28.--Area of privately owned timberland in northern Idaho by marketing zone and ownership class, 1981

Marketing zone	Ownership class		
	Forest industry	Private	Total
	- - - - - - - - - - - - - - - Acres	- - - - - - - - - - - - - - -	
Panhandle	320,527	733,937	1,054,464
Northern	542,565	850,971	1,393,536
Total	863,092	1,584,908	2,448,000

Table 29.--Net volume, net annual growth, annual mortality, and annual removals of growing stock and sawtimber on privately owned timberland in northern Idaho by marketing zone and ownership class

Marketing zone	Ownership class: Forest industry			Ownership class: Nonindustrial Private			Total		
	GROWING STOCK	SAWTIMBER		GROWING STOCK	SAWTIMBER		GROWING STOCK	SAWTIMBER	
	Thousand cubic feet	Thousand board feet: International ¼-inch rule	Thousand board feet: Scribner rule	Thousand cubic feet	Thousand board feet: International ¼-inch rule	Thousand board feet: Scribner rule	Thousand cubic feet	Thousand board feet: International ¼-inch rule	Thousand board feet: Scribner rule
Net volume, 1981:									
Panhandle	644,295	2,666,587	2,243,427	1,354,529	5,280,638	4,397,067	1,998,824	7,947,225	6,640,494
Northern	1,116,498	4,893,088	4,165,837	1,474,079	6,320,904	5,316,799	2,590,577	11,213,992	9,482,636
Total	1,760,793	7,559,675	6,409,264	2,828,608	11,601,542	9,713,866	4,589,401	19,161,217	16,123,130
Net annual growth, 1980:									
Panhandle	21,615	72,194	65,648	50,400	186,754	168,444	72,015	258,948	234,092
Northern	29,471	110,876	99,735	48,141	187,832	168,538	77,612	298,708	268,273
Total	51,086	183,070	165,383	98,541	374,586	336,982	149,627	557,656	502,365
Annual mortality, 1980:									
Panhandle	3,447	12,450	10,443	4,787	17,744	14,820	8,234	30,194	25,263
Northern	4,713	16,235	13,732	5,745	22,524	19,085	10,458	38,759	32,817
Total	8,160	28,685	24,175	10,532	40,268	33,905	18,692	68,953	58,080
Annual removals, 1980:									
Panhandle	10,525	58,097	47,161	37,489	213,422	170,635	48,014	271,519	217,796
Northern	94,428	535,885	434,824	35,945	205,329	167,040	130,373	741,214	601,864
Total	104,953	593,982	481,985	73,434	418,751	337,675	178,387	1,012,733	819,660

Table 30.--Area, net volume, net annual growth, annual mortality, and annual removals of growing stock and sawtimber on privately owned timberland in northern Idaho by county

County	Area, 1981	Volume, 1981			Growth, 1980		
		GROWING STOCK	SAWTIMBER		GROWING STOCK	SAWTIMBER	
		Thousand cubic feet	Thousand board feet		Thousand cubic feet	Thousand board feet	
	Acres		International ¼-inch rule	Scribner rule		International ¼-inch rule	Scribner rule
Benewah	274,953	568,060	2,376,340	1,997,863	18,481	67,263	61,094
Bonner	323,095	585,712	2,169,513	1,801,619	22,678	79,221	71,300
Boundary	144,575	248,441	930,622	771,409	10,015	34,527	31,097
Clearwater	420,317	778,924	3,389,391	2,879,938	21,692	82,797	73,952
Idaho	242,896	433,174	1,926,637	1,638,677	10,620	43,510	39,406
Kootenai	311,841	596,611	2,470,750	2,069,603	20,841	77,937	70,601
Latah	223,404	407,679	1,774,793	1,502,193	12,579	48,939	43,510
Lewis	75,304	113,242	501,890	422,030	3,956	16,268	14,321
Nez Perce	102,714	150,539	664,383	558,920	5,236	21,087	18,608
Shoshone	328,901	707,019	2,956,898	2,480,878	23,529	86,107	78,476
Total	2,448,000	4,589,401	19,161,217	16,123,130	149,627	557,656	502,365

Table 30 (con.)

County	Mortality, 1980			Removals,[1] 1980		
	GROWING STOCK	SAWTIMBER		GROWING STOCK	SAWTIMBER	
	Thousand cubic feet	Thousand board feet		Thousand cubic feet	Thousand board feet	
		International ¼-inch rule	Scribner rule		International ¼-inch rule	Scribner rule
Benewah	3,164	11,381	9,555	15,174	85,337	69,297
Bonner	1,666	6,115	5,092	14,627	82,433	65,787
Boundary	552	2,128	1,759	7,392	42,561	34,676
Clearwater	2,812	9,867	8,305	70,579	401,659	325,050
Idaho	2,282	8,930	7,823	9,308	53,124	42,672
Kootenai	2,852	10,570	8,857	10,821	61,188	48,036
Latah	1,178	4,374	3,657	18,814	106,723	86,955
Lewis	315	1,367	1,132	4,838	27,606	23,060
Nez Perce	410	1,741	1,442			
Shoshone	3,461	12,480	10,458	26,834	152,102	124,127
Total	18,692	68,953	58,080	178,387	1,012,733	819,660

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[1] Includes saw logs, veneer logs, pulpwood, utility poles, house logs, posts and poles, cedar products logs, and logging residues.

Van Hooser, Dwane D. Forest statistics for private land in northern Idaho. Resource Bulletin INT-34. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station; 1984. 38 p.

Presents land area, timberland area, timber volume, and components of change for the private lands in northern Idaho.

KEYWORDS: forest survey, timberland, inventory volume

The Intermountain Station, headquartered in Ogden, Utah, is one of eight regional experiment stations charged with providing scientific knowledge to help resource managers meet human needs and protect forest and range ecosystems.

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